



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,706	12/07/2005	Daniel Dermark	3670-59	1854

23117 7590 09/27/2007
NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

BEHM, HARRY RAYMOND

ART UNIT	PAPER NUMBER
----------	--------------

2838

MAIL DATE	DELIVERY MODE
-----------	---------------

09/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/559,706

Applicant(s)

DERMARK, DANIEL

Examiner

Harry Behm

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/7/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the bridge on the primary side, as in Claim 1, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 rejected under 35 U.S.C. 102(b) as being anticipated by Greenfeld (US 2001/0030879).

With respect to Claim 1, Greenfeld discloses a method for use in a DC/DC-rectifier (Fig. 6 10), said rectifier comprising a transformer (Fig. 6 T1) and a bridge (Fig. 6 Q1,Q1B,Q2,Q2B) on the primary side (Fig. 6 P1) of the transformer, the primary side bridge comprising a first pair (Fig. 6 Q1,Q1B) of switches and a second pair (Fig. 6 Q2,Q2B) of switches, and, on the secondary side (Fig. 2 S1,S2) of the transformer, a secondary side bridge (Fig. 6 Q3-Q8) comprising a first pair (Fig. 6 Q4,Q7) of switches and a second pair of switches (Fig. 6 Q3,Q5), said method comprising linking on/off-switching of the first pair (Fig. 2 Q1) of switches on the primary side to the on/off-switching of the first pair (Fig. 2 Q4,Q7) of switches on the secondary side, with the method being characterized in that the linking of the on/off-switching of the first pair (Fig. 6 Q1,Q1B) of switches on the primary side to the on/off-switching of a first pair (Fig. 6 Q4,Q7) of switches on the secondary side is carried out by switching off the first pair on the secondary side (Fig. 2 t0-t1) when the first pair on the primary side is switched on, and conversely, when the first pair on the primary side is switched off (Fig.

Art Unit: 2838

2 t1-t2).

With respect to Claim 2, Greenfeld discloses the method of claim 1, additionally comprising linking on/off-switching of the second pair (Fig. 6 Q2,Q2B) of switches on the primary side to on/off-switching of the second pair (Fig. 6 Q3,Q5) of switches on the secondary side, characterized in that the linking of the on/off-switching of the second pair of switches on the primary side to the on/off-switching of the second pair (Fig. 2 Q3,Q5) of switches on the secondary side is carried out by switching off the second pair on the secondary side when the second pair (Fig. 2 Q2) on the primary side is switched on, and conversely, when the second pair (Fig. 2 Q2) on the primary side is switched off.

With respect to Claim 3, Greenfeld discloses the method of claim 1, according to which the on/off switching of the pairs of switches is carried out by applying individual control voltage pulse trains (Fig. 2 Q1-Q8) to each pair of switches, characterized in that the control voltage pulse train which is applied to the pair of switches on the secondary side is the inverse [Q4,Q7 complement to Q1,Q1B with dead time] of the control voltage pulse train applied to the pair of switches on the primary side to which it is linked.

With respect to Claim 4, Greenfeld discloses a DC/DC converter. See Claim 1 for details.

With respect to Claim 5, Greenfeld discloses a DC/DC converter as in claim 1. See claim 2 for details.

With respect to Claim 6, Greenfeld discloses a DC/DC converter as in claim 1. See claim 3 for details.

Additional rejections could be made with Sun (US 6,426,884).


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sun (US 6,426,884) discloses a DC-DC converter with a bridge and complementary pairs in Figures 3 and 4 which could be used for an anticipation rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry Behm whose telephone number is 571-272-8929. The examiner can normally be reached on Business EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



KARL EASTHOM
SUPERVISORY PATENT EXAMINER